

Application No. 10/817,450
Amendment Dated May 25, 2005
Reply to Office Action Dated February 16, 2005

Remarks

Claims 1-8 are pending.

Claims 1-8 stand rejected.

Claims 1-8 are submitted herein for review.

No new matter has been added.

In the Office Action, the Examiner has rejected claims 1, 2 and 4-8 under 35 U.S.C. § 103(a) as being unpatentable over the prior art in view of Deliens (U.S. Patent No. 5,908,570). The Examiner has also rejected claim 3 as being unpatentable over the prior art and Deliens, further in view of Johnson (U.S. Patent No. 6,485,589).

Applicant respectfully disagrees with the Examiner's contentions and submits the following remarks in response. Applicant further notes that there are no substantive amendments to the claims. Claims 1 has been amended solely to clarify the scope of the claim and to place the claim into accordance with standard U.S. Practice.

The present invention as claimed in claim 1 is directed to a fluid meter, and in particular, a water meter. The water meter tank has a bottom. A measurement chamber is inserted through an opening, opposite the tank bottom in an insertion direction parallel to its axis of symmetry. The measurement chamber has at least one orifice connected in a sealed manner to a pipe of the tank via a seal that is adapted to be compressed between an external surface of the chamber and an internal surface of the tank. The seal is made from a bead of polymerizable

plastic material deposited onto one of the surfaces.

In this arrangement, the present invention overcomes a particular drawback associated with prior art fluid meters, such as those discussed in the Applicant's admitted prior art. In prior art arrangements, the seal between the external surface of the chamber and the internal surface of the tank is hand fitted leading to slow manufacturing times and defective sealing conditions. See page 2, line 34, to page 3, line 5.

For example, a particular problem with prior art seals in fluid meters is stated on page 3, lines 6-22:

"To be more precise, in the case of a lateral orifice, to provide a seal, the unstressed seal has a diameter greater than the width of the gap between the measurement chamber and the tank. Thus when the measurement chamber, which has a constant generally circular section, is inserted, *the seal is subjected to forces in the direction opposite to that in which the measurement chamber is inserted into the tank, which is also of constant circular section, and this applies over the whole of the assembly height. These relatively high forces may expel the seal from the groove, detaching the seal from the measurement chamber, with the risk of deforming the seal in a direction opposite to the insertion direction, and even cutting the seal*, the measurement chamber being assembled to the tank with no seal, making the meter useless. These problems are incompatible with mass production assembly of the meter." (emphasis added)

The arrangement of the present invention, using a bead of polymerizable plastic material deposited onto one of the surfaces, alleviates the above problems.

For example, page 4, lines 19-25 of the present invention states:

"Thanks to the invention, assembly becomes compatible with mass production assembly quality and productivity constraints. In particular, thanks to the invention, the operation of fitting the seal bead is automated and systematic, in contrast to the prior art, where the seal may be omitted, since it is fitted manually."

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Furthermore, page 4, line 35 to page 5 line 4 of the present invention states:

“Most importantly, the measurement chamber may be inserted into the tank as already mentioned above *without any risk of the seal being expelled from the groove or being deformed in a direction opposite the insertion direction or being cut.*” (emphasis added)

Turning to the prior art, Applicant notes that the element of a seal placed between the outside of a measuring chamber and the internal surface of a tank near the tank orifice is in the prior art.

The Deliens reference relates to an electric kettle having a seal 10 which can be a bead of polymerizable silicone and which is disposed between the side walls 7 of the tank and the peripheral rim of a heater plate 4.

Applicant first asserts that the cited prior art document, namely the Deliens reference, is not in a field of analogous art to the prior art, that one of ordinary skill in the art of fluid meters would look to in solving the particular problem which the present invention addresses.

In order to be in the field of analogous art, the reference, “...must either be in the field of the applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the invention was concerned.” *In Re Oetiker* 977 F.2d 1443, 1446. See MPEP 2141.01(a).

In the present invention as well as the prior art, the field of endeavor is fluid

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meters, water meters or other similar mechanical devices. The Deliens reference on the other hand is in the field of electric heating appliances. Thus, the Deliens reference is not in the same field of endeavor.

Furthermore, the Deliens reference is not reasonably pertinent to the particular problem with which the present invention is concerned. In the present invention, Applicant is concerned principally with a particular drawback associated with water meter construction. The problem addressed in the present invention is the difficulty in keeping a seal on a fluid meter measuring chamber in place and undamaged as the chamber is inserted, under sustained friction, into a tank.

The Deliens reference on the other hand deals with field of a removable and serviceable electric heating element in a water kettle. The particular issue being addressed in the present invention, to overcome the admitted art's failings, is not even present in the Deliens reference. The use of a polymerizable material in Deliens is used only to seal a heating plate to an outer wall. One of reasonable skill in the art of fluid meters, faced with the problem presented in the prior art, would not look to seals used in simply any mechanical device or appliance, but rather would look to other proposed solutions in the field of fluid meters.

Furrthermore, with regard to the particular reference cited by the Examiner, one of ordinary skill in the art faced with the problem of fitting a measuring chamber seal into a water tank would not look to the Deliens reference because the Deliens reference does not suffer from the same drawback (insertion problem) that the present invention seeks to address as discussed in more detail below.

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Therefore, Applicant submits that the Deliens reference is not in an analogous field with respect to the present invention, or with respect to the prior art of water meters, and respectfully requests that, for this reason alone, the rejection of claims 1-8 based on this reference be withdrawn.

In addition to the above remarks, Applicant submits that even if the Examiner disagrees with the above assessment, and concludes the Deliens is analogous prior art, there is still no teaching or suggestion in either the water meter prior art or in the Deliens reference to combine these references with one another.

To establish a prima facie case of obviousness the Examiner must show the following steps:

- 1) set forth the differences in the claim over the applied reference;
- 2) set forth the proposed modifications of the references which would be necessary to arrive at the claimed subject matter; and
- 3) explain why the proposed modification would be obvious.

To satisfy step (3), the Examiner must identify where the prior art provides a motivating suggestion to make the modifications proposed in step (2), *In re Jones*, 958 F.2d 347, 21 U.S.P.Q. 2d 1941 (Fed Cir. 1992). The mere fact that the prior art may be modified as suggested by the Examiner does not make the modification obvious, unless the prior arts suggests the desirability of the modification, *In re Fritch*, 922 F.2d 1260, 23 U.S.P.Q. 2d 1780 (Fed Cir.

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1992). As explained in more detail below, there is no motivating suggestion to modify the prior art with the Deliens references, nor any suggestion as to how they can be modified, no matter how they are applied.

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absents some teaching or suggestion or incentive to combine them, *In re Bond*, 910 F.2d 831, 834; 15 U.S.P.Q. 2d 1566, 1568 (Fed Cir. 1990). With respect to the pending claims in the present application, the references cited by the Examiner fail to provide any teaching or suggestion for using a polymerized plastic for a seal in a fluid meter. Instead the Examiner appears to have used the present invention as a blueprint to find the features of the present invention, without showing a suggestion or motivation within the references themselves for combining them.

Applicant begins by noting that the water meter prior art clearly does not teach the use of polymerized plastic for the seal. In order to form the rejection then, the Examiner states in the Office Action that, "It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the teachings of Deliens for the sealing of the two surfaces since such sealing would prevent leakage from between the surfaces."

Such a statement is insufficient to meet the burden of proving obviousness. The Examiner must instead point to a particular suggestion in the Deliens reference that suggests or teaches its combination in the field of fluid meters to address the problem at hand.

The Deliens reference contains no such teaching or suggestion. The Deliens reference mentions only the use of placing a polymerized material between a heating plate and a wall of a

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water tank, presumably to “prevent leakage from between the surfaces,” as noted by the Examiner in the Office Action.

However, in order to combine the references as suggested by the Examiner, the Deliens reference should include a direct teaching or a suggestion that the disclosed polymerized seal is also usable in fluid meter joints or other similar arrangements, which it does not.

In fact, the simple sealing of the measuring chamber to the tank wall is not the reason for using a polymerized plastic for the seal in the present invention as claimed in claim 1. Rather, the problem in the prior art was not the seal itself per se, but rather the manner of inserting the seal into the chamber as well as the ability of the seal to maintain its integrity and position as the chamber is lowered downward in an insertion direction into the tank.

Thus, there is no suggestion in either of the references to combine their teaching with one another as suggested by the Examiner. Because the arrangement in Deliens is not even subject to the same problem as in the water meter prior art, namely the seal’s constant friction with the inside wall of the tank during insertion, one of ordinary skill in the art having the water meter prior art before them would not look to the Deliens reference. No specific statements in either of the references suggest otherwise.

As such, in addition to the above outlined reasons regarding non-analogous art, Applicant further requests that the rejection of claims 1-8 as being unpatentable over the prior art and Deliens be withdrawn as there is no teaching or suggestion to combine the references as suggested by the Examiner.

In view of the forgoing, Applicant respectfully submits that pending claims 1-8 are in

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condition for allowance, the earliest possible notice of which is earnestly solicited. If the Examiner feels that an interview would facilitate the prosecution of this Application they are invited to contact the undersigned at the number listed below.

Respectfully submitted,

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